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Distilled water	500 cc.
Ammonium nitrate	.25 gr.
Potassium phosphate	.1 “
Magnesium sulphate	.1 “
Calcium chloride	.05 “
Dextrose	.005 “
Trace of ferrous sulphate	
Agar	7 gms.

The cultures were placed under bell jars in a north window and were examined almost daily. The spores continued to look green and healthy. After a few days, probably through faulty sterilization or because of the dextrose, bacteria destroyed six out of ten plates. About four weeks later, the spores in the good plates showed signs of swelling which is the first indication of spore germination. This was followed by a hyaline appearance at one end of the spore which became egg-shaped because of the protruding germ tube through the ruptured spore coat.

Protenemal growth took place rapidly, the protenema being filamentous alga-like in appearance. Transverse cross walls were cut off, the plate soon becoming filled with this branching growth. In none of my cultures did I observe any oblique septa, which are indicative of rhizoid formation. The growth was entirely apical, the lateral branches being formed behind septa.

The buds were formed on the lateral branches. Walls intersecting each other cut off portions of the ends of the filaments until a pear-shaped structure resulted with cell division in three dimensions. From these buds the leafy branch will originate.

I made sections and then triple-stained portions of the cultures in order to preserve the facts stated above:

1. Spores before germination.
2. Spores in the egg-shaped stage, showing the hyaline spot.
3. Germ tube in the one- and two-celled stage.
4. Buds in several stages.

403 West 115th St., New York City.

HABITAT OF CEPHALOZIA FRANCISCI ON LONG ISLAND, N. Y.

Roy Latham

Fifteen miles west from the eastern extremity of the north prong of Long Island is located Horton's Point, just north of the village of Southold. This is a sandy beach, one to two hundred yards in latitude, extending two miles along the coast of Long Island Sound. Inclosed on east and south by wooded hills and shifting sand-dunes, on the west cut off by an inlet from the Sound.

For a short distance back from the flood tide margin the beach is high and dry and vegetated with *Cladonia rangiferina*, *Panicum amarum*, *Prunus maritima*, *Hudsonia tomentosa*, *Crysopsis*, and clumps of shrub oak, *Quercus stellata.*

South of this drier section the surface dips for about two-thirds the length, forming a narrow trough of sandy bog, covered with a various growth, including *Pinus rigida* and Vacciniaceae, offering continuous shade. Here is the habitat of *Cephalozia Francisci* growing mostly on small plots of barren sands, forming beautiful dark-green mats from a few inches to ten feet in diameter. In one spot where a slight gully transverses the depression, the plant follows the shady western edge for fifty feet.

Growing contiguously and abundantly is *Cephalozia macrostachya* and more rarely *C. fluitans*. *Riccardia pinguis* and *Fossombronia foveolata* occupy more rush-grown localities in the region.

The Musci are meagrely represented by *Leucobryum glaucum*, *Sphagnum inundatum* and *S. subsecundum*.

Orient, New York

NOTE ON BUXBAUMIA INDUSIATA BRIDEL

Ralph S. Nanz

Dr. Grout's note in the May number of The Bryologist indicates the wide range of *Buxbaumia indusiata* Brid., in spite of its rarity. This species of *Buxbaumia* has been found twice within the past year in the vicinity of Ithaca, N. Y. On September 7, 1916, Dr. Andrews and I found the moss on a decayed stump, probably hemlock, in a very moist woods near the McLean bogs, about fifteen miles northeast of Ithaca. The capsules, four in number, were immature and green in color. On April 9, 1917, Prof. K. M. Wiegand and Mr. F. B. Wann discovered it in Coy Glen Ravine, two miles south of Ithaca. Ten mature capsules were found on a log, growing together with *Lophocolea heterophylla* (Schrad.) Dum. The specimens collected agree in appearance with Dr. Grout's photographs. The mature capsules are light brown in color, in contrast to the deep red brown of *B. aphylla*. The two very opposite types of situation are worth noting; in the one case a swampy woods, and in the other a rocky ravine.

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MISCELLANEOUS NOTES

A Record to be Envied.—Under date of January 29, 1917, Dr. John Macoun writes from Sidney, B. C., as follows:

"I take quite an interset in the Bryologist and am still collecting. Think of it! I sent my first mosses to Sullivant in 1861. The first new species I found was *Leptodon nitidus*, named by him from my specimens.

"Since then I have found nearly one thousand of all kinds, from trees to seaweeds, and I am at it yet."

Four-lobed spore mother cells in Catharinaea.—Most students of the mosses, hepatics, and lichens are interested primarily in the collection and identification of the various species of these plants, or in studying their distribution